

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application:

Listing of Claims:

1. (Currently Amended) A method for treating an implant surface intended for implantation into bone tissue, ~~e-h-a-r-a-c-t-e-r-i-s-e-d-i-n~~ said method comprising:

providing a microroughness onto said implant surface by treating the metallic implant surface with an aqueous solution of hydrofluoric acid;

wherein said microroughness ~~comprising~~ comprises pores and peaks having a pore diameter of $\leq 1 \mu\text{m}$, a pore depth of $\leq 500 \text{ nm}$, and a peak width, at half the pore depth, of from 15 to 150% of the pore diameter, and

the implant surface is a metallic implant surface.

2. (Currently Amended) [[A]] The method according to claim 1, wherein the pore diameter is within the range of 50 nm to 1 μm and the pore depth is within the range of 50 to 500 nm.

3. (Currently Amended) [[A]] The method according to claim 1 or 2, wherein a root-mean-square roughness (R_q and/or S_q) of $\leq 250 \text{ nm}$ is provided.

4-5. (Cancelled)

6. **(Currently Amended)** **[[A]]** The method according to claim **[[5,]]** 1 or 2, wherein the concentration of the hydrofluoric acid is less than 0.5 M.

7. **(Currently Amended)** **[[A]]** The method according to claim **[[6,]]** 1 or 2, wherein the metallic implant surface is treated for an etching period of up to 180 sec at room temperature.

8. **(Currently Amended)** **[[A]]** The method according to claim 7, wherein the concentration of the hydrofluoric acid is 0.1 M and the etching period is up to 60 sec at room temperature.

9. **(Currently Amended)** **[[A]]** The method according to claim 1 or 2, further comprising providing a macroroughness on the implant surface prior to providing the microroughness.

10. **(Currently Amended)** **[[A]]** The method according to claim 9, wherein the macroroughness is provided by blasting the implant surface.

11. **(Currently Amended)** **[[A]]** The method according to claim 1 or 2, wherein said metallic implant surface is made of commercially pure titanium or an alloy of titanium.

12. **(Cancelled)**

13. **(Currently Amended)** An implant for implantation into bone tissue having an implant surface ~~e-h-a-r-a-c-t-e-r-i-s-e-d~~ characterized in that at least a part of the implant surface comprises a microroughness which comprise pores and peaks having a pore diameter of $\leq 1 \mu\text{m}$, a pore depth of $\leq 500 \text{ nm}$, and a peak width, at half the pore depth, of from 15 to 150% of the pore diameter.

14. **(Currently Amended)** ~~[[An]]~~ The implant according to claim 13, wherein the pore diameter is within the range of 50 nm to $1 \mu\text{m}$ and the pore depth is within the range of 50 to 500 nm.

15. **(Currently Amended)** ~~[[An]]~~ The implant according to claim 13 or 14, wherein the microroughness has a root-mean-square roughness (R_q and/or S_q) of $\leq 250 \text{ nm}$.

16. **(Currently Amended)** ~~[[An]]~~ The implant according to claim 13 or 14, wherein the implant surface further comprises a macro-roughness.

17. **(Currently Amended)** ~~[[An]]~~ The implant according to claim 13 or 14, wherein said implant is a metallic implant.

18. **(Currently Amended)** ~~[[An]]~~ The implant according to claim 17, wherein said metallic implant is made of commercially pure titanium or an alloy of titanium.

19. **(Currently Amended)** **[[An]]** The implant according to claim 13 or 14, wherein the implant is a dental implant.

20. **(Currently Amended)** **[[An]]** The implant according to claim 13 or 14, wherein the implant is an orthopaedic implant.